

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
21 June 2007 (21.06.2007)

PCT

(10) International Publication Number
WO 2007/069807 A1(51) International Patent Classification:
B27K 9/00 (2006.01) **B27J 1/00** (2006.01)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/KR2006/001060

(22) International Filing Date: 23 March 2006 (23.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(30) Priority Data:
10-2005-0122691

13 December 2005 (13.12.2005) KR

10-2006-0023878 15 March 2006 (15.03.2006) KR

(71) Applicant (for all designated States except US): **HONG, Hook** [KR/KR]; 435-5, Changhyeon-ri, Hwado-eup, Namyangju-si, Gyeonggi-do 472-848 (KR).

(71) Applicant and

(72) Inventor: **RYU, Hai-il** [KR/KR]; 527-88, Guam-dong, Yuseong-gu, Daejeon 305-800 (KR).(74) Agent: **CHO, In-jae**; Newkorea International Patent & Law, Office 3rd Fl., Janghyun Bldg., 637-23, Yeoksam-dong, Gangnam-gu, Seoul 135-909 (KR).**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2007/069807 A1

(54) Title: FUNCTIONAL CORNSTALK BOARD AND PREPARATION METHOD THEREOF

(57) **Abstract:** Disclosed is a functional cornstalk board and a preparation method thereof. The functional cornstalk board of the present invention includes 1 to 10 parts by weight of a curing agent, based on the total weight of the mixture of 6 to 10 parts by weight of cornstalk and 0.2 to 2 parts by weight of a binder or silicate, wherein the functional cornstalk board is obtained by molding the raw material at a molding temperature of 120 to 210 °C and a molding pressure of 10 to 30,000 kg /cm³ for a molding time of 0.5 to 20 minutes using the semiautomatic or multistage automatic heat press device. The functional cornstalk board of the present invention is a cornstalk plywood material having a bending strength of 300 to 750 kg /cm³, a density of 0.5 to 0.8 g/cm³, and capable of manufacturing the cornstalk plywood material into various shapes and desired standards of a woodcut, scantling, plywood, construction materials and a slate due to its easy molding by the pressure and the extrusion, and therefore the functional cornstalk board may be environment-friendly, mass-produced and economical since the cornstalk is used as the unlimited resource without adversely affecting the forests so as to obtain woods or plywoods, and particularly it may be light in weight, easily processed in molding and cutting, and also used for application products into which the colors are added.